CLAIMS:

1. A magnetic field correcting method for correcting an inhomogeneity error of a static magnetic field generated in a space by a pair of magnets that are supported by yokes so that the magnets face each other across said space, comprising the steps of:

correcting a quadratic term component of said static magnetic field by a quadratic term component of a magnetic field generated in said space by a pair of circular loop coils disposed in said space symmetrically with respect to a center of said space; and

compensating a zero-th order term component of the magnetic field in said space from said pair of circular loop coils by a zero-th order term component of a magnetic field generated in said space by a coil wound around at least one of said yokes.

2. A magnetic field generating apparatus comprising:

a magnetic field generating device having a pair of magnets that are supported by yokes so that the magnets face each other across a space, for generating a static magnetic field in said space;

a correcting device for correcting a quadratic term component of said static magnetic field by a quadratic term component of a magnetic field generated in said space by a pair of circular loop coils disposed in said space symmetrically with respect to a center of said space; and

a compensating device for compensating a zero-th order term component of the magnetic field in said space from said pair of circular loop coils by a zero-th order term component of a magnetic field generated in said space by a coil wound around at least one of said yokes.

3. The magnetic field generating apparatus of claim 2, wherein

a pair of gradient coils for imparting a gradient to the static magnetic field

in said space is provided on pole surfaces of said pair of magnets, and

said pair of circular loop coils is provided along outer peripheries of said pair of gradient coils.

4. The magnetic field generating apparatus of claim 2, wherein said yokes comprise at least one vertical yoke and a pair of horizontal yokes facing each other horizontally extending from ends of said vertical yoke.

5. The magnetic field generating apparatus of claim 4, wherein said pair of magnets is provided on opposing surfaces of said pair of horizontal yokes.

6. The magnetic field generating apparatus of claim 5, wherein the magnets of said pair each have a pole piece.

7. The magnetic field generating apparatus of claim 4, wherein said at least one vertical yoke comprises a pair of yokes symmetric with respect to the center of said space.

8. The magnetic field generating apparatus of claim 4, wherein said coil is wound around said vertical yoke.

9. A magnetic resonance imaging apparatus comprising:

a magnetic field generating device having a pair of magnets that are supported by yokes so that the magnets face each other across a space, for generating a static magnetic field in said space;

a correcting device for correcting a quadratic term component of said static magnetic field by a quadratic term component of a magnetic field generated in said space by a pair of circular loop coils disposed in said space symmetrically with respect to a center of said space;

a compensating device for compensating a zero-th order term component of the magnetic field in said space from said pair of circular loop coils by a zero-th order term component of a magnetic field generated in said space by a coil wound around at least one of said yokes;

a signal acquiring device for acquiring magnetic resonance signals generated by spins in said space; and

an image producing device for producing an image based on said acquired magnetic resonance signals.

10. The magnetic resonance imaging apparatus of claim 9, further comprising:

a sensing device for sensing the magnetic field in said space from said pair of circular loop coils; and

a control device for controlling said compensating device based on said sensed magnetic field.

11. The magnetic resonance imaging apparatus of claim 9, wherein

a pair of gradient coils for imparting a gradient to the static magnetic field in said space is provided on pole surfaces of said pair of magnets, and

said pair of circular loop coils is provided along outer peripheries of said pair of gradient coils.

12. The magnetic resonance imaging apparatus of claim 9, wherein

said yokes comprise at least one vertical yoke and a pair of horizontal yokes facing each other horizontally extending from ends of said vertical yoke.

13. The magnetic resonance imaging apparatus of claim 12, wherein

said pair of magnets is provided on opposing surfaces of said pair of horizontal yokes.

14. The magnetic resonance imaging apparatus of claim 13, wherein

the magnets of said pair each have a pole piece.

15. The magnetic resonance imaging apparatus of claim 12, wherein

said at least one vertical yoke comprises a pair of yokes symmetric with respect to the center of said space.

16. The magnetic resonance imaging apparatus of claim 12, wherein

said coil is wound around said vertical yoke.